

~~RESTRICTED~~

~~RECORD COPY~~

~~RECORD COPY~~



~~RECORD COPY~~

DOCUMENTS BRANCH
PERIODICAL ABSTRACTS

Number 3

11 Jun 1947

~~RECORDED~~

~~RECORD COPY~~

Prepared By

Documents Branch

CENTRAL INTELLIGENCE GROUP
2430 E Street, N. W.
Washington, D. C.

FILE NUMBER 03

NO CHANGE IN CLASS

DECLASSIFIED

CLASS. CHANGED TO: TS. S. O

NEXT REVIEW DATE:

AUTH: HR 702P

DATE 8 1980

REVIEWER: 61833

~~RESTRICTED~~

17

WARNING

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE ACT, 50 U.S.C., 31 AND 32, AS AMENDED. ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO ANY UNAUTHORIZED PERSON IS PROHIBITED WITHOUT SPECIAL AUTHORITY FROM THE DIRECTOR OF CENTRAL INTELLIGENCE.

~~RESTRICTED~~

C I G

Documents Branch

PERIODICAL ABSTRACTS

Number 3

11 Jun 1947

Prepared by

Documents Branch
CENTRAL INTELLIGENCE GROUP
2430 E Street, N. W.
Washington, D. C.

~~RESTRICTED~~

RESTRICTED

This publication contains titles and abstracts of Japanese periodicals. Each periodical is abstracted as a whole and its issues summarized with a listing of volume and issue or report numbers and the dates of publication. Each periodical and each title and abstract has also been assigned an Index Number at the right in accordance with the Basic Intelligence Directive. Due to limitations of personnel and volume of material, it has been found necessary to require local agencies interested in any item covered by these abstracts to first send a representative to Sixth floor, 1340 L Street, N. W., in order to preview the article prior to formal request for further translation. Formal requests should be made through the Office of Collection and Dissemination, CIG, 2430 E Street, N. W., Washington, D. C.

Distribution List

State Dept (IND)	4
Library of Congress	1
Dept of Commerce (Publications Board)	2
AID	1
CINCFE	10
OCCmIC	1
OQMG	1
OCSigO	3
OCE	2
OCC	1
OCT	2
AAF	21
AGF	10
ICAF	1
NWC	1
AFSC	1
ID	5
ONI	54
Manhattan Engr Dist	1
CIG	3
DB	60
 Total	 185

RESTRICTED

RESTRICTED

C I G

Documents Branch

PERIODICAL ABSTRACTS

* * *

NIPPON KIKAI GAKKAI ZASSHI 4406.0000
 "Journal of the Society of Mechanical Engineers,
 Japan"

Published monthly by Society of Mechanical Engineers, Japan. Articles, experimental data, and summaries on mechanical engineering subjects by the society members and prominent Japanese engineers.

The following are abstracts of articles from Japanese-language issues of Feb 1945 to Jul 1946.

Feb-Apr 1945 - Vol 48, No 332

Section I, Engineering Articles and Reports

"Coupled Vibration of the Propeller Shaft and Blades, Part III".

An explanation of the vibration formula, the stability of the two blade propeller under the flexing vibration of the propeller shaft, SHIMIZU Hiroshi. 3 pp. 4406.0400

"A Study of the Breakdown Properties of Materials" 4413.0000
 The theory of static and dynamic stresses. 4205.0200
 ONO Akimasa. 2 pp.

"Theoretical Research on Stage Efficiency of Steam Turbines, Part 3" 4406.0400

The theory of the compound-velocity impulse turbine, Curtiss and Terry turbines. SUGAHARA Sugao, NAKAMURA Kozo. 2 pp.

"The Minimum Value of the Critical Reynold's Number" 8700.0000
 A study of fluid flow in a round tube. ITAYA Shoju, IWANAMI Shigezo. 1 $\frac{1}{2}$ pp.

"Quantity of Air Absorbed in Oil" 4203.0500
 A study of faulty lubrication in machinery caused by the presence of air. ITAYA Shoju. 3 pp.

"Research on Sharp-edged Orifice and Its Influence on Coefficient of Discharge" 8700.0000
 Theoretical study. MATSUMOTO Yokichi. 1 p.

REF ID: A6572
RESTRICTED

"Hydraulic Research on Bearing Clearances and Its Relationship to Increased Bearing Efficiency, Part 3"	4406.0000
A study on shape of bearing clearances and the problems in lubrication. KOMAI Kanji. 2 pp.	
"Rotary-Type Bending Fatigue Tester for Large Specimens"	4406.0300
ONO Akimasa. 1/2 p.	
"Bearing Efficiency of Knife Edges"	4406.0300
A study of bearing loads and shape of knife edges. AKASHI Kazue. 1/2 p.	
"The Study of the Corrected Spur Gear"	4406.0300
A study on shape of spur gears and its mechanical efficiency. OTA Fumihiro. 2 pp.	
"Gear Shapes Having Constant Sliding Factor"	4406.0300
A study of involute and cycloidal gears. HORIUCHI Yoshikazu. 1 p.	

Section II, Contributed Articles

"A New Experimental Formula for the Coefficient of Friction in Pipes"	8700.0000
ITAYA Shoju. 1 p.	
"Hertz's Hardness Theory"	8700.0000
The theory and experiments in hardness factor. AKASHI Kazue. 1 p.	

Section III, Summary

"Measuring Apparatus and Measuring Methods, Part 8"	4406.0300
Different methods of obtaining hardness of steel experimentally, and experimental results.	
YOSHIZAWA Takeo. 9 pp.	
"Internal Combustion Engines, Part 9"	4406.0400
Methods employed to eliminate vibrations in Diesel-engine mounts. SEKI Toshiro. 11 pp.	

Section IV, Selected Patents

(TN: Only patents with numbers above 160,000 (1943) are abstracted in this section.)

Patent No 161224, "Speed Governor on the Carburetor of an Engine"	4406.0000
TANAKA Hiroji.	
Patent No 161295, "Power Transmission in Aircraft Engines"	2302.0200
A new type of power drive from the aircraft engine to the propeller. KUROKAWA Masazo.	

RESTRICTED

Patent No 161494, "Precision Bearing for High Speed Drive Shafts" 4406.0000
 A bearing which adapts itself to expansion of the shaft. NAKASHIMADA Masao.

Patent No 161522, "Hydraulic Control for Aircraft Use" 2302.0200
 A spring-loaded control mechanism for the hydraulic system. ARAYAMA Haruo.

Patent No 161296, "Air-cooled Cylinder Heads" 4406.0400
 A new type of cylinder head for internal-combustion engines. OKADA Shunichi.

Patent No 161573, "Gas Generating Apparatus for Aircraft Use" 2302.0200
 An apparatus for generating gas from liquid fuels. SUZUKA Yuzaburo.

Patent No 161647, "A Method of Supplying Auxiliary Ignition Fuels into the Fuel Line of a Diesel Engine" 4406.0400
 TANAKA Hiroji.

Patent No 161670, "A Vacuum Casting Box" 4205.0215
 After the pattern is removed from the sand mold, the air is expelled. This decreases the number of blow-holes in the casting. SASAKI Rokuro.

Patent No 161789, "Water-cooled Vanes for Hot Fluid Turbines" 4406.0100
 The coolant is circulated through three sets of holes in the core of each vane. EGUCHI Kinzo.

Patent No 161791, "Electro-plating Apparatus Using Different Alloys or Metals Simultaneously" 4205.1000
 Different metal wires are electrically melted and then sprayed for plating by compressed air. SHITAMURA Toshihiko.

Patent No 161792, "Reverse Screw Air Blower" 4406.0100
 Each of the three fins on blower are spun by means of bevel gear system. KADOWAKI Tokuichiro.

Patent No 162226, "Improvements on the Rotary-type Air Compressor" 4406.0100
 KAWADA Sanji.

Patent No 162447, "Reaction Thrust Mechanism" 4406.0400
 Improvements on the rocket-type mechanism. NAITO Shisei.

REF ID: A6572
RESTRICTED

May-Dec 1945 - Vol 148, No 333	
Section I, Engineering Articles and Reports	
"Fatigue and Internal Distortion in Metals"	4205.0200
A short review. NISHIHARA Toshio. $\frac{1}{2}$ p.	
"A Derivation of Metal Fatigue Curve"	4205.0200
NISHIHARA Toshio. 1 p.	
"The Strength of Rectangular Plates Having Plug Welds, and the Relationship Between the Hardness of Plug Weld and the Course of Rupture of Plate when Subjected to Tension"	4413.0800
MIMA Genjiro. 2 pp.	
"The Strength of Copper-lead Alloys and the Microscopic Study of Its Failure when Subjected to Tension"	4205.0902
MIMA Genjiro. $\frac{1}{2}$ p.	
"Distortion of Rectangular Plate Having a Circular Hole when subjected to Tension, and Relationship Between the Diameter of Hole and the Plate Thickness"	4413.0800
MIMA Genjiro. $\frac{1}{2}$ p.	
"A Method for Calculating the Stability of Bent and Twisted Beams, Report No 1 and (Same as Report 1, except the cross-section of beams are not uniform) Report No 2"	4413.0800
. Kondo Seiji. 5 pp.	
"The Study of Fuel-Injection Type Gasoline Engine, Report No 1, Vaporization and Combustion of Gasoline in Combustion Chamber"	4406.0400
A study of gasoline engine having a fuel injection system and electric ignition, not employing a carburetor. NAGAO Fujio. 1 p.	
"An Experiment on the Removal of Guide Vanes in a Centrifugal Pump"	4406.0100
Author's arguments against the use of guide vanes. ODA Toshiyuki. 2 pp.	
"V-Section, Laminated, Metal Packings"	4406.0100
A report on the advantages of above packing over that of leather packings. HITAKA Koichi. $1\frac{1}{2}$ p.	
"Metal Packings to be Used between Two Moving Parts"	4406.0100
A research report on development of a new type of metal packing for above use. HITAKA Koichi. $2\frac{1}{2}$ pp.	

RESTRICTED

Section II, Contributed Articles

"Various Problems Concerning Compressed-Air Conveyors, Report No 2" . 4406.0100
 Rated efficiency, performance, and indicator diagrams of the air compressor.
 NIMURA Kosuke. 4 pp.

Section III, Summary

"Applied Mechanics and Dynamics of Machinery, Part 10 - The Economy of Materials During Manufacturing Processes" . 4406.0100
 Article stresses importance of preliminary inspection of materials, such as static and dynamic stability, tensile strength, fatigue, etc. before assembling of parts. UTOGUCHI Eizen. $3\frac{1}{2}$ pp.

"Industrial Raw Materials and Testing of Materials, Part 2, the Elastic Properties of Steel Bolts Under High Temperatures" . 4413.0000
 A study on elasticity of steam boiler flange bolts. ITO Shigeru. 2 pp.

"Measuring Apparatus and Measuring Methods, Part 12, Experiments with Vibrator" . 4406.0300
 An apparatus which induces vibration in machine parts to study its dynamic properties. UTOGUCHI Eizen. $2\frac{1}{2}$ pp.

"Internal Combustion Engines, Part 13, Flexible Mounts for Reciprocating Engines" . 4406.0400
 A study of various methods employed for mounting stationary reciprocating engines, e.g., Diesel engines, WAAS, Heinrich (German report translated by SEKI Toshiro.) 10 pp.

"Aircraft and Aircraft Engines, Part 14, Fatigue Tests of Light-Alloy Connecting Rods" . 2302.0200
 Emil von Rajakovics (German report translated by UTOGUCHI Eizen.) 1 p.

Section IV, Research Data

"Standards for Tensile Strength Tester, Compression Load Tester" . 4420.0300
 A listing of Japanese standards in regards to testing methods using the above machines.. ONO Akimasa. 2 pp.

"An Explanation on the Adopted Standards for the Tensile Strength Tester and Compression Load Tester" . 4420.0300
 TAKENAKA Jiro. $3\frac{1}{2}$ pp.

RESTRICTED

RESTRICTED

"Elasticity Testing Apparatus" 4420.0300
 An explanation of the above apparatus, and
 method of calculating the elasticity of mate-
 rial. OE Teiji. 3 pp.

"VDI Standards - VDI Standard for the Shapes and
 Use of Rubber" 4416.0202
 Characteristics of rubber (natural and synthet-
 ic), standards for different types of rubber,
 method of manufacture of different rubber prod-
 ucts, etc. Publication by VDI (German) Techni-
 cal Committee on Synthetic Materials, translated
 into Japanese. 19 pp.

Jan 1946 - Vol 49, No 334

Section I, Engineering Articles and Reports

"The Strength of Metals under Alternating Bending
 and Torsional Stresses" 4205.0900
 Theory and experimental tests. NISHIHARA
 Toshio. 1½ p.

"Adhesion of Bearing Alloys, Report No 1" 4205.0900
 Testing and treating of alloy in order to im-
 prove the adhesive properties. SAGA Takuro. ½ p.

"Research on Starting Friction of Babbitt-type
 Bearings" 4205.0900
 A study of the starting friction of the babbitt
 bearing using vegetable oil, animal oil and
 petroleum oils as lubricants. SASAKI Tokio. ½ p.

"The Endurance Limit of Round Bar Having a Small
 Diametrical Hole" 8700.0000
 The study in the endurance strength of alum-
 num, chrome-steel and aluminum alloy specimens.
 MINAMIOJI Kenichi. ½ p.

"The Study on the Elasticity of a Bar Subjected to
 a Distributed Load" 8700.0000
 The theory of shear and bending moment in a bar
 subjected to a distributed load. KITO Fumiko.
 3 pp.

"Tables and Diagram for Freon 22" 4504.0200
 Thermodynamical theory and application of
 Freon 22. SUGAWARA Sugao. 2 pp.

"Experiments with the Double-Vacuum Phénoménon
 in Steam Ejectors" 4406.0100
 Graphs showing the performance of steam
 ejectors. SUGAWARA Sugao. 6 pp.

RESTRICTED

RESTRICTED

"Test Results on Firing of Low-grade Coal in Steam Locomotives" 4402.0000
 Graphs and tables. YOKOBORI Susumi. 2½ pp.

"Experiments on the Hydraulic Resistance of Automatic Valves" 4406.0100
 Theory and experiments in connection with automatic valves in hydraulic pumps and reciprocating compressors. YAMAGISHI Ryuichi. 4 pp.

"Calculation Concerning the Effect of Roughness upon the Development of Cavitations" 8700.0000
 Theory and experiments in connection with the effect of roughness on bodies when placed in a fluid flow, e.g., effect of roughness on the surface of a marine propeller. KITO Fumiko. 3½ pp.

"A Study on the Efficiency of Pneumatic Forging Hammers" 4406.0100
 KONDO Seiji. 2 pp.

"Automatic Polishing Machine" 4406.0100
 An introduction to a new-type polishing machine for putting superfinishes on industrial products. SASAKI Tokio. 2½ pp.

Section II, Contributed Articles

"Introduction to a New-type Conical Gear" 4406.0300
 A new type of bevel gear which transmits power at other angles than a right angle. ARAKAWA Nobuo. 2½ pp.

Section III, Summary

"Industrial Raw Materials and Testing of Materials, Part 1" 4413.0000
 The significance of the yielding point in connection with the fatigue strength of high-tensile steel, the characteristics of steel under tension and compression after cooling to low temperatures. Originally a German article, translated by UTOGUCHI Eizen. 11 pp.

Section IV, Research Data

"Welding Standards for Machine Design" 4401.0000
 A compilation of various specifications and standards in regards to industrial welding:

1. Standards for the x-ray examination of electrical welds. 5 pp.
2. Specifications for flange weldings. 3 pp.
3. Specifications for seam welding. 1 p.

RESTRICTED

REF ID: A6572
RESTRICTED

4. Standards and specifications for electro-welding. 5 pp.
5. Specifications for steam-boiler welding, welding standards for boilers, and all other auxiliaries in a boiler plant. 24 pp.

Feb 1946 - Vol 49, No 335

Section I, Engineering Articles and Reports

"The Future of Industrial Welding" 4401.0000
A general discussion of the welding progress in industry, and its future outlook. SASAKI Shintaro. 6½ pp.

"Development of Internal Stresses in Non-cylindrical Shells Due to Welding" 4401.0000
A method of computing the internal stresses developed in the welding of non-cylindrical shells. MIZOGUCHI Koki. 1½ pp.

"Brittleness of Steel at Low Temperatures" 4205.0233
A discussion of the impact, tensile, and hardness tests of special steels at low temperatures. KASHIWABARA Masakatsu. ½ p.

"A Study on Fatigue and Internal Friction of Metals, Report No 3" 4205.1000
Theory and graphs. ENOMOTO Nobusuke. 1½ pp.

"The Vibration of Linear Beams Due to Dynamic Loads" 4413.0000
Theory and mathematical explanations. ONO Akimasa. 3 pp.

"Problems in the Thermal Conductivity of a Body Having Thermal Coefficients Which are Affected by Time, Position and Temperature" 8700.0000
SAWADA Masayoshi. ½ p.

"Viscous Flow through a Rectangular Channel and Its Application to the Friction Pump" 4406.0100
SHIRAKURA Masaaki. 2½ pp.

"Horizontal Valve System, Low-Pressure Diesel Engine" 4406.0400
YAMASHITA Okiie. 1½ pp.

"Theory and Operation of the Cupola, and the Remelting of Steel Filings" 4205.0235
ITO Kokichi. 2 pp.

"The Analytical Theory of Spur Gears" 4406.0300
KUBOTA Masao. 1½ pp.

REF ID: A6572
RESTRICTED

RESTRICTED

"The Theoretical Study on the Cutting Hob for Involute Gears" 4406.0300
 MOROZUMI Muneharu. 1½ pp.

"The Change in the Internal Stress of Steel Balls for Bearings During the Course of Manufacture" 4406.0300
 KAWAGUCHI Toranosuke. 2½ pp.

"Applications of the Pneumatic Microméter" 4420.0300
 An explanation of the French Solex Pneumatic Micrometer. ISHIHARA Seiichiro. 4 pp.

"A Graphical Solution of Vibration Problems" 8700.0000
 Theory and mathematical explanations. TAKAHASHI Yasundo. 2½ pp.

"A Constant-Speed Device for Circular and Non-circular Wheels Connected by a Cord" 8700.0000
 TAKAHASHI Yasundo. 2½ pp.

Section II, Research Data

"Standards for the Charpe and Izod Impact Tester" 4420.0300
 ONO Akimasa. 4 pp.

Mar-May 1946 - Vol 49, No 336

Section I, Engineering Articles and Reports

"Experiments with the Twisting of Materials which Show Lateral-Bending Tendencies" 8700.0000
 MII Hisao. 3 pp.

"The Research of Internal Stresses Due to Quenching of Steel" 4205.1002
 The study of the internal stresses remaining in different steels after the quenching process.
 SUGENO Takeshi. 3 pp.

"Hydrostatic Pressures on Rectangular Plates" 8700.0000
 Mathematical study of fluid pressures on rectangular plates. WATANABE Masaki. 2 pp.

"Plasticity of Rectangular Plates under Bending Moments Uniformly Distributed Along Its Edges" 8700.0000
 WATANABE Masaki. 4 pp.

"Measurement of Three-Dimensional Stress by X-Ray" 8700.0000
 The study of stress in steels and alloys.
 ISHII Yugoro. 2½ pp.

"A Mathematical Solution of a Girder Supported by n + 1 Cross Beams" 4413.0000
 Shear and moment calculations. NAGAMOTO Kikuo.
 2 pp.

RESTRICTED

RESTRICTED

"The Thermodynamic Properties of Dichlorodifluoromethane" 4408.0100
 Research on dichlorodifluoromethane and its adaption
 to industrial use. SUGAWA Sunao. 2 pp.

"Problems in the Thermal Conductivity of a Body Having
 Thermal Coefficients which Are Affected by Time,
 Position and Temperature, Report No 2" 8700.0000
 SAWADA Masayoshi. 2 pp.

"Characteristics of Friction Pumps Having Opposed
 Actuators of Equal Peripheral Velocity (High-Efficiency
 Friction Pump) Report No 3" 4406.0100
 MIYAZU Atsushi. 3 pp.

"Characteristics of Laminar and Turbulent Flow in
 Friction Pumps with Opposed Actuators Having Equal Per-
 iipheral Velocity (High-Efficiency Friction Pump)
 Report No 4" 4406.0100
 MIYAZU Atsushi. 2 $\frac{1}{2}$ pp.

"The Effect of the Fluid-Passage Cross-section on the
 Characteristics of the Friction Pump (High-Efficiency
 Friction Pump) Report No 5" 4406.0100
 MIYAZU Atsushi. 3 pp.

"Spur-Gear Calculations Using the Analysis of the Tooth-
 Profile Curve, Report No 1" 4406.0300
 A mathematical analysis and graphs. MORITA Katsuhiko.
 3 pp.

"Spur-Gear Calculations Using the Analysis of the Tooth-
 Profile Curve, Report No 2" 4406.0300
 A mathematical analysis and graphs. MORITA
 Katsuhiko. 2 pp.

Section II, Contributed Articles

"Calculating Safety Factors" 8700.0000
 Calculating safety factors for various shapes.
 OKUDA Katsumi. 8 $\frac{1}{2}$ pp.

Section III, Summary Section

"Automobiles and Automobile Engines" 4403.0200
 The brake control system. F. Ostwald (German). 2 pp. 4406.0400

Section IV, Research Data

"Welding Standards for Machine Design" 4401.0000
 A compilation of various specifications and standards
 in regards to industrial welding and marine crank-
 cases and cylinder blocks. 54 pp.

RESTRICTED

RESTRICTED

Jun 1946 - Vol 49, No 337

Section I, Engineering Articles and Reports

"Joining of Metals With Heat" 4205.1000
 Experiments on the adhesive properties of various metals at a temperature much lower than its melting point. IGATA Atsuomi. 4 pp.

"Volumetric Efficiency of Four-cycle Engines, Report No 3" 4406.0400
 The effects of different valve timing. ASANUMA Tsuyoshi. 2 pp.

"Calculation of the Life of a Roller Bearing" 4406.0300
 NISHIHARA Toshio. 2 pp.

"Theoretical Calculation on Pressure Waves Generated by a Ship Propeller" 4406.0400
 KITO Fumiki. 3 pp.

"Research of a Gear Pump Having a Sine-Curve Gear" 4406.0100
 ITAYA Shoju. 1 p.

"Test Results on Firing of Low-Grade Coal in Steam Locomotives, Report No 2" 4402.0000
 YOKOBORI Susumu. 2 pp.

"Accuracy of Machine Tools" 4406.0300
 The loss of lathe accuracy due to static loads. OKUSHIMA Keiji. 1 p.

"The Study of Metal Cutting" 4406.0300
 The relationship between the cutting force and the cutting speed. EBIHARA Keikichi. 4½ pp.

"The Precision of the Indexing Table on a Boring Machine" 4406.0300
 KOSHIBA Tokuji. 2 pp.

"The Strength of Hooks" 4406.0100
 NANRI Takeichi. 1 p.

Section II, Contributed Articles

"The Theory of Head Loss in a Disturbed Flow and Its Practical Application" 8700.0000
 MIYAZU Atsushi. 1½ pp.

"A Filing System for Cataloging Engineering Drawing" 8710.4000
 A card-filing system for engineering drawings, and each card has the following information: the article, its dimensions, its use, etc. KOBAYASHI Toshio. 2 pp.

RESTRICTED

~~RESTRICTED~~

"Measuring Instrument for Thread Diameters" 8700.0000
 The study of the air micrometer and its use
 for thread measuring. ISHIHARA Seiichiro. 1½ pp.

Jul 1946 - Vol 49, No 338

Section I, Engineering Articles and Reports

"The Fatigue Limits of Stamp-Forged Pieces" 4205.1000
 Experimental results. KAWAMOTO Minoru. 3 pp.

"The Mathematical Calculation for the Buckling of a Solid Column which Does Not Follow Hook's Law" 4413.0000
 SATO Shichiro. 3½ pp.

"Experiments with Bearings Subjected to Variable Loads" 4406.0300
 SUGIMOTO Yutaka. 3½ pp.

"Elastic Buckling of Polygonal Plates Clamped at Its Edges" 8700.0000
 YAMAMOTO Masayuki. 1 p.

"Transverse Vibrations of Circular Disks" 8700.0000
 TAKAHASHI Toshio. 2½ pp.

"Mathematical Solution on the Boundary Layer of a Flat Plate" 8700.0000
 ASAO Harumi. 2½ pp.

"The Study of Gear Tooth Profiles, Report No 2" 4406.0300
 The study in the patches of contact and gear-tooth profiles. HORIUCHI Yoshikazu. ½ p.

"Mathematical Calculations for Involute Gears Having a Normal Pitch" 4406.0300
 OKADA Isamu. 2 pp.

Section II, Research Data

"Data of the Micron H-102 Gear-Hobbing Machine" 4406.0300
 OTOBE Shunji. 2 pp.

"Magnetic Drill and Universal Joint" 4406.0300
 YOSHIDA Isamu. 1 p.

End of "Journal of the Society of Mechanical Engineers, Japan"
Abstracts

End of DOCUMENTS BRANCH PERIODICAL ABSTRACTS No 37

~~RESTRICTED~~